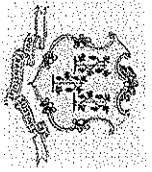


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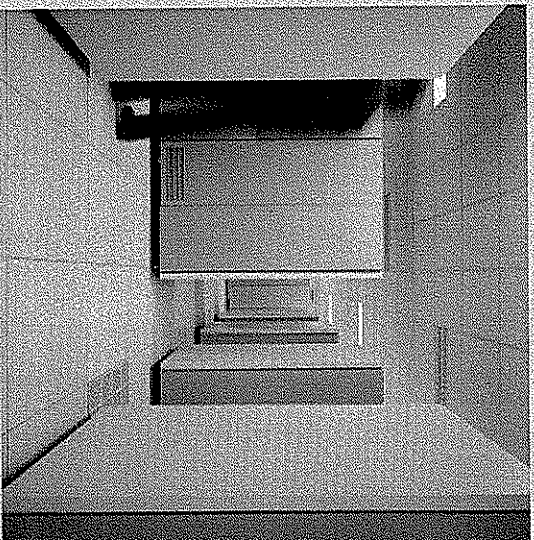
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Bonding Subcommittee Presentation

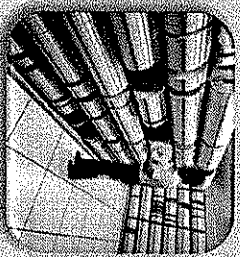
State of Connecticut Data Center Overview



Department of Information Technology
March 12, 2010

Our Current Environment

- There is a single state-of-the-art Data Center, located in a leased building, which is manned 24 x 7 x 365 by DOTT
- The Data Center has grown significantly since 2005 and is at capacity with no room for growth



Storage capacity has increased by 2,172% since FY2004. In FY 2008, DOTT stored 2.4 Petabytes of information in our Data Center!

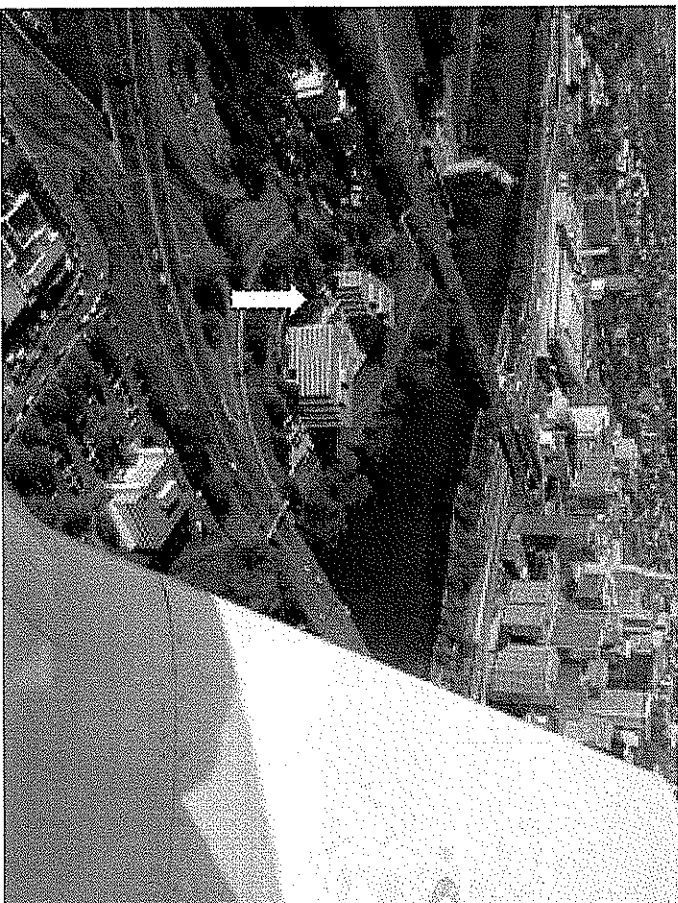


Bandwidth has increased from 45 mbps/day in 2005 to 155 mbps/day in 2009

- The existing Data Center's needs exceed power and cooling availability, requiring extreme human intervention to remain operational
 - The Data Center only houses approximately 50% of the State's applications, and there are additional computer rooms located in the agencies which do not meet technical/security guidelines
 - The State pays an additional \$600,000/yr. for limited back up and recovery capabilities at IBM in Sterling Forest, NY
- Under this scenario, only 35% of the applications hosted at DOTT can be recovered at one time, would require approx. 72 hours to do so, and would only be available on a first-come, first-served scenario if there were a regional outage. Can only use Sterling Forrest for 6 weeks after which time we would need to find another operating site and equipment (which is not in the budget).

When Hurricane Gustav hit in 2008, IBM canceled our Disaster Backup And Recovery (DBAR) testing at Sterling Forrest as they didn't have enough hardware to accommodate the hurricane victims and our test

The cost to recover all major applications (hosted at DOTT) at Sterling Forrest would be approx. \$3M/yr.



DOIT Aerial View 2008

The ability to execute our Disaster Backup And Recovery Plan is more critical because the current DOIT facility is located on a flood plain; the U.S. Army Corps of Engineers has declared the levee to be deficient and not certified for protection from floods, requiring additional DBAR diligence.

The Solution

Create a dual -Data Center environment for the State of Connecticut:

Within 2 years, build a second "green" Data Center on state-owned property (\$21 Million Bond under discussion)

Move some of our existing applications support from East Hartford to the new location

Place all new systems support in the new location

Create a 50 – 50 workload distribution plan between the 2 locations to accommodate disaster recovery and backup plans

NOTE: A \$2.5 Million Bond allocation was approved for the initial study in 2007. We have received \$500,000.

Within 5 years, relocate DOIT and the current Data Center to existing state property, eliminating reliance on the leased building in a flood zone (\$27 Million future request)



Stakeholders:

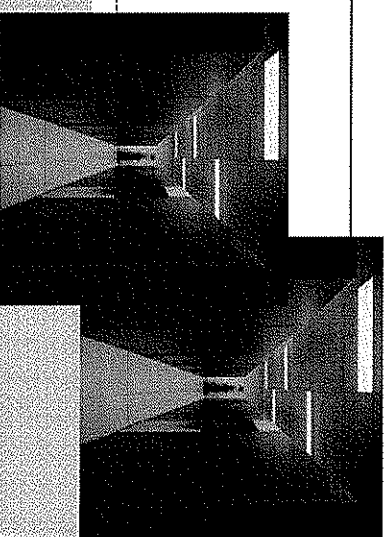
Department of Information Technology

Department of Public Works

Office of Policy and Management

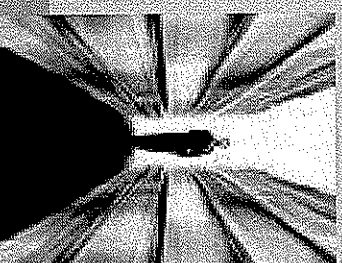
Executive Branch State Agencies & Constitutional Offices

- Resolves the State's need for additional hosting capacity that will be required by DMV, DPS, DOL, OPM, DEP, DPH and others
- Disaster Recovery would be accomplished using our two Data Centers to provide protection for **all** required agency applications at no additional cost to the State
 - Eliminates reliance on IBM for 72 hour back-up insurance (for only 35% of state portfolio), and on external vendors to host applications we can't accommodate, *saving \$3M annually*
 - Provides Business Continuity computing for State Agencies that are currently unprotected (approximately 50% of state applications) (*cost-avoidance of over \$3M*)
- Provides production in both Data Centers, but will be controlled by one Operations Center at DOIT, minimizing staff needs
- Provides high reliability and high availability
- Consolidate expensive computer rooms in state agencies for a more secure environment and additional savings to the State

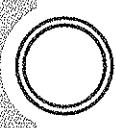


Results Of Our Options Analysis

- We considered four options for Data Center services including Disaster Recovery Services, Co-location vendors, Outsourcing and to Build Our Own Solution.
- The least expensive and most reliable option – including security threat analysis - over a 10 year period is to build our own (a second data center).
- A Requirements Study was conducted by Bruns-Pak Consulting, experts in the Data Center field.
- ◎ The original recommendation from the consultants would have cost the State \$100M:
 - 72,000 sq feet building with 29,000 sq ft of raised floor.
- ◎ We needed to scale back and still meet the State's goals for an estimated \$21M.
 - 21,000 sq ft structure: 7,500 sq ft raised floor with expansion to 11,000 sq ft raised floor
 - Optimum use of the 7,500 sq ft raised floor (high density computing)
 - Scalable structure



The Proposed Project Timeline by Phase with Required Bond Fund Authorizations



Activities	Date	Cost
Design/Engineering (current authorization)	9/10 - 1/11	\$2.5M
Construction & Implementation	2/11 - 9/13	\$21M
RFP Process 2/11 - 10/11		
Construction 10/11 – 6/13		
Equipment and Installation 7/13 – 9/13		
Testing 8/13 – 9/13		
Commissioning 8/13 – 9/13		



IMPACT OF THE PROJECT ON THE OPERATING BUDGET



One-time Costs/FY14

- Racks
\$105,000
- Network Design & Equipment
\$1,500,000
- Moving Costs
\$150,000

Note: Based on our current Data Center occupation strategy:
 • Move some of our existing applications support from East Hartford to the new location
 • Place all new systems support in the new location
 • Create a 50 - 50 workload distribution plan between the 2 locations to accommodate disaster recovery and backup plans

Ongoing Budget/FY14

- Data Center Operating Costs
Maintenance for generator, UPS, batteries and other infrastructure equipment: \$750,000/year
- Power
@ \$.12 per kwh: \$1,050,000
- State Personnel
3-6 Computer Operators for 24X7 coverage
\$195,000 - \$390,000
- Security Guards
\$225,000

Note: Costs are based on current Data Center costs. Does not take into account design & cost efficiencies in the new Data Center. Also, FY14 will be a partial year for budget implications. Numbers shown are for full year budget impacts that would start in FY15.

COST SAVINGS and COST AVOIDANCE OPPORTUNITIES

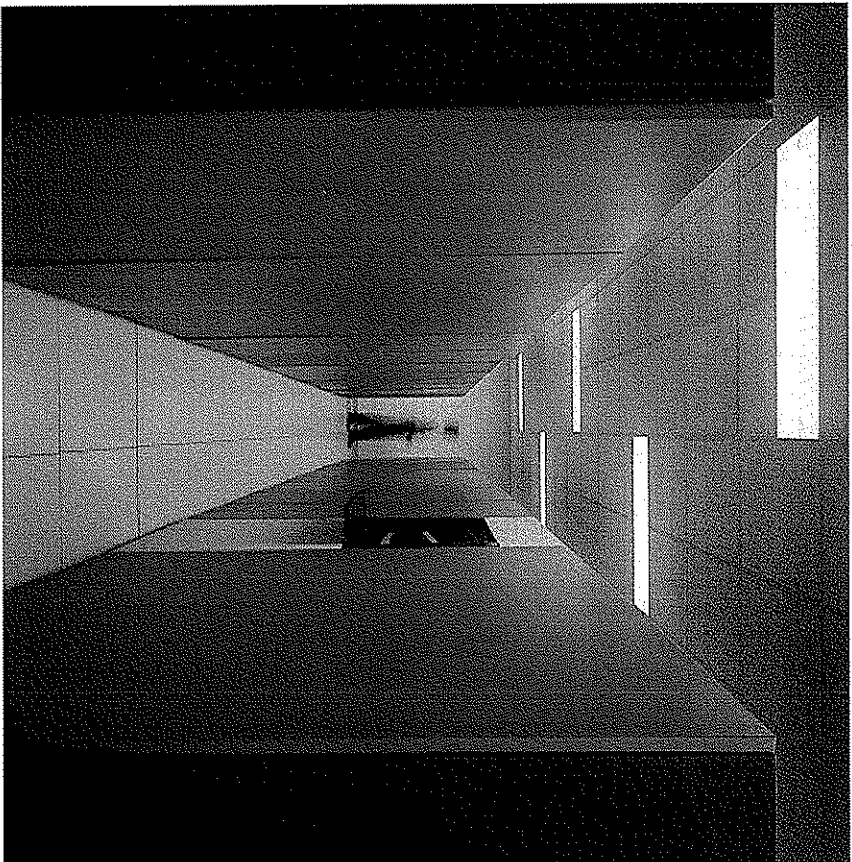
Cost Savings:

- DPW has projected State-owned Data Centers would save \$62 Million in facility costs over 20 years
- \$600,000/year Sterling Forrest and Iron Mountain recovery and tape storage services
- Establishes potential to consolidate existing computer rooms in large agencies
- Consolidation of Data Center redundancy needs (Ex: DMV, DOC, Core-CT, CJIS, DPS/COLLECT, etc.)
- Additional energy savings are anticipated associated with the construction of "Green" Data Centers

Cost Avoidance:

- \$2.4 Million annually associated with recovering all DOJ supported platforms at Sterling Forrest
- Estimated \$3 Million annually to recover platforms at Sterling Forrest supported at agency sites
- \$8 Million associated with remediation work required at 101 East River Drive to increase cooling and power capacities
- \$1.8 Million for HIPAA Agencies computer rooms remediation





Discussion